

minimum temperatures were the lowest on record at: Denver, 43; Vineyard Haven and Amarillo, 52; Augusta, 58; Savannah, 61; Jacksonville, 64; Tampa, 66.

The greatest daily range of temperature and data for computing the extreme and mean monthly ranges are given for each of the regular Weather Bureau stations in Table I. The largest values of the greatest daily ranges were: Williston, Miles City, and Idaho Falls, 48; Bismarck and Huron, 47; Moorhead and Carson City, 46; Rapid City, 45. The smallest values were: Hatteras, 14; Block Island, Woods Hole, Jupiter, Point Reyes Light, and Eureka, 17; Nantucket, Key West, Port Eads, Corpus Christi, and San Francisco, 18.

Among the extreme monthly ranges the largest were: Huron, 61; Moorhead, 60; Bismarck, 58; Pierre and Sioux City, 57; Williston and La Crosse, 56. The smallest values were: Key West, 19; Point Reyes Light and San Francisco, 20; Eureka, 21; Corpus Christi and Jupiter, 22; Port Eads, 23; Hatteras, Galveston, and Tatoosh Island, 24.

The accumulated monthly departures from normal temperatures from January 1 to the end of the current month are given in the second column of the following table, and the average accumulated departures are given in the third column for comparison with the departures of current conditions of vegetation from the normal condition.

Districts.	Accumulated departures.		Districts.	Accumulated departures.	
	Total.	Average.		Total.	Average.
New England	+ 0.5	+ 0.1	Florida Peninsula	-11.4	- 1.4
Middle Atlantic	+ 4.8	+ 0.6			
South Atlantic	+10.2	+ 1.3			
East Gulf	+ 1.7	+ 0.2			
West Gulf	+11.3	+ 1.4			
Ohio Valley and Tenn.	+11.2	+ 1.4			
Lower Lake	+11.3	+ 1.4			
Upper Lake	+23.1	+ 2.9			
North Dakota	+ 7.4	+ 0.9			
Upper Mississippi	+21.9	+ 2.7			
Missouri Valley	+21.4	+ 2.7			
Northern Slope	+ 9.4	+ 1.2			
Middle Slope	+25.0	+ 3.1			
Abilene (southern Slope) ..	+24.7	+ 3.1			
Southern Plateau	+ 5.5	+ 0.7			
Middle Plateau	+ 1.8	+ 0.2			
Northern Plateau	+15.9	+ 2.6			
North Pacific	+ 2.6	+ 0.3			
Middle Pacific	+ 1.9	+ 0.2			
South Pacific	+ 5.0	+ 0.6			

MOISTURE.

The quantity of moisture in the atmosphere at any time may be expressed by the weight of the vapor coexisting with the air contained in a cubic foot of space, or by the tension or pressure of the vapor, or by the temperature of the dew-point. The mean dew-points for each station of the Weather Bureau, as deduced from observations made at 8 a. m. and 8 p. m., daily, are given in Table I.

The rate of evaporation from a special surface of water on muslin at any moment determines the temperature of the wet-bulb thermometer, but a properly constructed evaporimeter may be made to give the quantity of water evaporated from a similar surface during any interval of time. Such an evaporimeter, therefore, would sum up or integrate the effects of those influences that determine the temperature as given by the wet bulb; from this quantity the average humidity of the air during any given interval of time may be deduced.

Measurements of evaporation within the thermometer shelters are difficult to make so as to be intercomparable at temperatures above and below freezing, and may be replaced by computations based on the wet-bulb temperatures. The absolute amount of evaporation from natural surfaces not protected from wind, rain, sunshine, and radiation, are being

made at a few experimental stations and will be discussed in special contributions.

Sensible temperatures.—The sensation of temperature experienced by the human body and ordinarily attributed to the condition of the atmosphere depends not merely on the temperature of the air, but also on its dryness, on the velocity of the wind, and on the suddenness of atmospheric changes, all combined with the physiological condition of the observer. A complete expression for the relation between atmospheric conditions and nervous sensations has not yet been obtained.

PRECIPITATION.

[In inches and hundredths.]

The distribution of precipitation for the current month, as determined by reports from about 2,500 stations, is exhibited on Chart III. The numerical details are given in Tables I, II, and III. The total precipitation for the current month was heaviest, 6 to 11 inches, in the northern portion of the Florida Peninsula, and nearly as heavy in a portion of western Indiana and northeastern Kansas. It was less than 0.5 in central Montana, central Idaho, central Washington and Oregon, and nearly all of California and Nevada.

Details as to excessive precipitation are given in Tables XII and XIII.

The diurnal variation, as shown by tables of hourly means of the total precipitation, deduced from self-registering gauges kept at the regular stations of the Weather Bureau, is not now tabulated.

The current departures from the normal precipitation are given in Table I, which shows that precipitation was in excess in the lower Lake Region and St. Lawrence Valley, the Plateau Region and Pacific Coast, portions of Iowa and adjacent States. Elsewhere it was deficient, and especially in the Atlantic and Gulf States. The large excesses were: Alpena, 3.3; Montreal, 3.2; Meridian, 2.6; Port Huron, 2.2. The large deficits were: Galveston, 5.2; Wilmington, 5.0; Hatteras, 4.9; Chattanooga, 4.3; Kittyhawk, 4.2; Norfolk, 4.1.

The total accumulated monthly departures from normal precipitation from January 1 to the end of the current month are given in the second column of the following table; the third column gives the ratio of the current accumulated precipitation to its normal value.

Districts.	Accumulated departures.		Districts.	Accumulated departures.	
	Inches.	Per ct.		Inches.	Per ct.
Lower Lake	+ 2.50	110	New England	- 5.00	83
North Dakota	+ 1.10	107	Middle Atlantic	- 2.80	91
Upper Mississippi	+ 0.80	103	South Atlantic	- 7.30	81
Southern Plateau	+ 0.30	105	Florida Peninsula	- 0.20	99
Middle Plateau	+ 3.10	138	East Gulf	- 7.00	83
Northern Plateau	+ 0.10	101	West Gulf	- 9.70	87
North Pacific	+ 4.60	113	Ohio Valley and Tenn.	- 3.50	89
Middle Pacific	+ 2.80	115	Upper Lakes	- 2.20	90
			Missouri Valley	- 0.30	99
			Northern Slope	- 0.10	99
			Middle Slope	- 2.50	96
			Abilene (southern Slope) ..	- 6.30	66
			South Pacific	- 1.90	77

The average departure for each district is given in Table I. By dividing each by its respective normal the following corresponding percentages are obtained (precipitation is in excess when the percentage of the normal exceeds 100):

Above the normal: Lower Lake, 113; upper Lake, 114; middle Plateau, 446; northern Plateau, 433; north Pacific, 141; middle Pacific, 282.

Normal: South Pacific, 100.

Below the normal: New England, 60; middle Atlantic, 42; south Atlantic, 51; Florida Peninsula, 74; east Gulf, 64; west Gulf, 36; Ohio Valley and Tennessee, 81; North Da-